

OBSERVATIONS & RECOMMENDATIONS

After reviewing data collected from **OSSIPEE LAKE SYSTEM (Berry Bay, Broad Bay, Lake Ossipee, Leavitt Bay, Lower Danforth Pond)**, the program coordinators have made the following observations and recommendations:

We would like to thank your group for sampling each lake/pond **once** this summer. However, we encourage your monitoring group to sample **additional** times each summer. Typically we recommend that monitoring groups sample **three times** per summer (once in **June, July, and August**). We understand that the number of sampling events you decide to conduct per summer will depend upon volunteer availability, and your monitoring group's water monitoring goals and funding availability. However, with a limited amount of data it is difficult to determine accurate and representative water quality trends. Since weather patterns and activity in the watershed can change throughout the summer, from year to year, and even from hour to hour during a rain event, it is a good idea to sample the lake/pond at least once per month over the course of the season.

If you are having difficulty finding volunteers to help sample, or to pick-up or drop-off equipment at one of the laboratories, please give the VLAP Coordinator a call and we will try to help you work out an arrangement.

FIGURE INTERPRETATION

- **Figure 1 and Table 1:** The graphs in Figure 1 (Appendix A) show the historical and current year chlorophyll-a concentration in the water column. Table 1 (Appendix B) lists the maximum, minimum, and mean concentration for each sampling season that the lake/pond has been monitored through the program.

Chlorophyll-a, a pigment found in plants, is an indicator of the algal abundance. Because algae are usually microscopic plants that contain chlorophyll-a, and are naturally found in lake ecosystems, the chlorophyll-a concentration measured in the water gives an

OBSERVATIONS AND RECOMMENDATIONS (INTERIM REPORT)

2004

estimation of the algal concentration or lake productivity. **The mean (average) summer chlorophyll-a concentration for New Hampshire's lakes and ponds is 7.02 mg/m³.**

Ossipee System Current Year Chlorophyll-a Data (2004)

	July 27, 2004 Result (mg/m ³)	Comparison to NH Mean
Lake Ossipee	1.57	Much less than
Lower Danforth Pond	2.68	Less than
Broad Bay	2.51	Less than
Leavitt Bay	2.51	Less than
Berry Bay	2.35	Less than

Ossipee System Historic Chlorophyll-a Data

	Sampling Period	Visual Analysis Trend	Statistical Analysis Trend
Lake Ossipee	2003 - 2004	Slightly decreasing (slightly improving)	N/A*
Lower Danforth Pond	2003 - 2004	Decreasing (improving)	N/A*
Broad Bay	1990 - 2004	Stable (ranging between approx. 2 - 3.5 mg/m ³)	N/A**
Leavitt Bay	1990 - 2004	Slightly increasing (slightly worsening)	N/A**
Berry Bay	2003 - 2004	Stable	N/A*

N/A* = Not applicable. This deep spot has been sampled for two seasons through VLAP. In order to statistically determine trends, at least 10 consecutive sampling seasons of data must be collected.

N/A** = Not applicable. Since this deep spot will have been sampled for at least 10 consecutive years in 2005, a statistical analysis of the data will be included in the 2005 Biennial Report.

The current year data show that the chlorophyll-a concentration at each of the five deep spots on the July sampling event was **less than** the state mean on the July sampling event. It is important to point out that the chlorophyll concentration at the **LOWER DANFORTH POND** deep spot was **slightly greater** than the chlorophyll concentration at the other four deep spots.

Overall, visual inspection of the historical data shows that the mean annual chlorophyll-a concentration at the **BROAD BAY** deep spot has remained **relatively stable**, ranging between approximately **2 and 3.5 mg/m³** since **1990**. Overall, visual inspection of the historical data show that the mean annual chlorophyll-a concentration at the **LEAVITT BAY** deep spot has **increased (meaning worsened)** since monitoring began in 1990. In the 2005 Biennial Report, since both of

these deep spots will have been sampled for at least 10 consecutive years, a statistical analysis of the historic data to determine if there has been a significant change in the annual mean since monitoring began will be conducted.

After 10 consecutive years of sample collection, we will be able to conduct a statistical analysis of the historical data for **LAKE OSSIPEE, LOWER DANFORTH POND, and BERRY BAY** to objectively determine if there has been a significant change in the annual mean chlorophyll concentration since monitoring began.

- **Figure 2 and Table 3:** The graphs in Figure 2 (Appendix A) show historical and current year data for lake/pond transparency. Table 3 (Appendix B) lists the maximum, minimum and mean transparency data for each sampling season that the lake/pond has been monitored through the program.

Volunteer monitors use the Secchi-disk, a 20 cm disk with alternating black and white quadrants, to measure water clarity (how far a person can see into the water). Transparency, a measure of water clarity, can be affected by the amount of algae and sediment from erosion, as well as the natural colors of the water. **The mean (average) summer transparency for New Hampshire's lakes and ponds is 3.7 meters.**

Ossipee System Current Year Transparency Data (2004)

	July 27, 2004 Result (meters)	Comparison to NH Mean
Lake Ossipee	4.9	Greater than
Lower Danforth Pond	4.75	Greater than
Broad Bay	4.7	Greater than
Leavitt Bay	4.9	Greater than
Berry Bay	4.96	Greater than

Ossipee System Historic Transparency Data

	Sampling Period	Visual Analysis Trend	Statistical Analysis Trend
Lake Ossipee	2003 - 2004	Slightly increasing (slightly improving)	N/A*
Lower Danforth Pond	2003 - 2004	Increasing (improving)	N/A*
Broad Bay	1990 - 2004	Decreasing (worsening)	N/A**
Leavitt Bay	1990 - 2004	Overall Stable (Fluctuating, but no continual increase or continual decrease since monitoring began.)	N/A**
Berry Bay	2003 - 2004	Slightly increasing (slightly improving)	N/A*

N/A* = Not applicable. This deep spot has been sampled for two seasons through VLAP. In order to statistically determine trends, at least 10 consecutive sampling seasons of data must be collected.

N/A** = Not applicable. Since this deep spot will have been sampled for at least 10 consecutive years in 2005, a statistical analysis of the data will be included in the 2005 Biennial Report.

The current year data show that the in-lake transparency at each of the five deep spots on the **July** sampling event was **greater than** the state mean. The difference between the minimum and maximum transparency readings among the five deep spots was approximately **0.2 meters**.

Overall, visual inspection of the historical data show that the mean annual transparency at the **BROAD BAY** deep spot has **decreased** (meaning **worsened**) since sampling began in 1990. Overall, visual inspection of the historical data show that the mean annual transparency at the **LEAVITT BAY** has **fluctuated**, but has not *continually increased* or *continually decreased* since monitoring began. In the 2005 Biennial Report, since both of these deep spots will have been sampled for at least 10 consecutive years, a statistical analysis of the historic data to determine if there has been a significant change in the annual mean since monitoring began will be conducted.

After 10 consecutive years of sample collection, we will be able to conduct a statistical analysis of the historical data for **LAKE OSSIPEE, LOWER DANFORTH POND, and BERRY BAY** to objectively determine if there has been a significant change in the annual transparency since monitoring began.

- **Figure 3 and Table 8:** The graphs in Figure 3 (Appendix A) show the amount of phosphorus in the epilimnion (the upper layer) and the hypolimnion (the lower layer); the inset graphs show current year data. Table 8 (Appendix B) lists the annual maximum, minimum, and median concentration for each deep spot layer and each tributary since the lake/pond has joined the program.

Phosphorus is the limiting nutrient for plant and algae growth in New Hampshire's freshwater lakes and ponds. Too much phosphorus in a lake/pond can lead to increases in plant and algal growth over time. **The median summer total phosphorus concentration in the epilimnion (upper layer) of New Hampshire's lakes and ponds is 12 ug/L. The median summer phosphorus concentration in the hypolimnion (lower layer) is 14 ug/L.**

Ossipee System Current Year Deep Spot Phosphorus Data (2004)

	July 27, 2004 Epilimnion Result (ug/L)	July 27, 2004 Hypolimnion Result (ug/L)	Comparison to NH Mean
Lake Ossipee	6	9	Less than
Lower Danforth Pond	8	12	Less than
Broad Bay	6	8	Less than
Leavitt Bay	6	8	Less than
Berry Bay	7	7	Less than

Ossipee System Historic Epilimnetic Phosphorus Data

	Sampling Period	Visual Analysis Trend	Statistical Analysis Trend
Lake Ossipee	2003 - 2004	Slightly increasing (slightly worsening)	N/A*
Lower Danforth Pond	2003 - 2004	Decreasing (improving)	N/A*
Broad Bay	1990 - 2004	Stable (Ranging between approx 6 and 10 ug/L)	N/A**
Leavitt Bay	1990 - 2004	Stable (Ranging between approx 4 and 12 ug/L)	N/A**
Berry Bay	2003 - 2004	Slightly decreasing (slightly improving)	N/A*

Ossipee System Historic Hypolimnetic Phosphorus Data

	Sampling Period	Visual Analysis Trend	Statistical Analysis Trend
Lake Ossipee	2003 - 2004	Slightly increasing (slightly worsening)	N/A*
Lower Danforth Pond	2003 - 2004	Decreasing (improving)	N/A*
Broad Bay	1990 - 2004	Stable (Ranging between approx 6 and 10 ug/L)	N/A**
Leavitt Bay	1990 - 2004	Stable (Ranging between approx 4 and 14 ug/L)	N/A**
Berry Bay	2003 - 2004	Slightly decreasing (slightly improving)	N/A*

N/A* = Not applicable. This deep spot has been sampled for two seasons through VLAP. In order to statistically determine trends, at least 10 consecutive sampling seasons of data must be collected.

N/A** = Not applicable. Since this deep spot will have been sampled for at least 10 consecutive years in 2005, a statistical analysis of the data will be included in the 2005 Biennial Report.

The current year data for the epilimnion and the hypolimnion show that the mean annual phosphorus concentration was ***less than*** the state median at each deep spot on the **July** sampling event.

Overall, visual analysis of the historical data at the **BROAD BAY and LEAVITT BAY** deep spot shows that the phosphorus concentration in the epilimnion and the hypolimnion has remained ***relatively stable*** since monitoring began in **1990**.

After 10 consecutive years of sample collection, we will be able to conduct a statistical analysis of the historical data for **LAKE OSSIPEE, LOWER DANFORTH POND, and BERRY BAY** to objectively determine if there has been a significant change in the annual phosphorus since monitoring began.

TABLE INTERPRETATION**➤ Table 2: Phytoplankton**

Table 2 (Appendix B) lists the current and historical phytoplankton species observed in the lake/pond. Specifically, this table lists the three most dominant phytoplankton species observed in the sample and their relative abundance in the sample. In addition, this table has been enhanced this year to include the overall phytoplankton cell abundance rating of the sample. The overall phytoplankton cell abundance in a sample is calculated using a formula based on the relationship that DES biologists have observed over the years regarding phytoplankton concentrations, algal concentrations, and biological productivity in New Hampshire's lakes and ponds. A mathematical equation is used to classify the overall abundance of phytoplankton cells in a sample into the following categories: *sparse*, *scattered*, *moderate*, *common*, *abundant*, and *very abundant*. Generally, the more phytoplankton cells there are in a sample, the higher the chlorophyll concentration and the higher the biological productivity of the lake.

**Ossipee System Current Year Phytoplankton
Dominant Species (2004)**

	July 27, 2004	Overall Plankton Abundance Rating
Lake Ossipee	<i>Dinobryon</i> (golden-brown) <i>Rhizosolenia</i> (diatom) <i>Chroococcus</i> (cyanobacteria)	Scattered
Lower Danforth Pond	<i>Synura</i> (golden-brown) <i>Chrysosphaerella</i> (golden-brown) <i>Dinobryon</i> (golden-brown) <i>Asterionella</i> (diatom)	Moderate
Broad Bay	<i>Dinobryon</i> (golden-brown) <i>Rhizosolenia</i> (diatom) <i>Coelosphaerium</i> (cyanobacteria)	Scattered
Leavitt Bay	<i>Dinobryon</i> (golden-brown) <i>Coelosphaerium</i> (cyanobacteria) <i>Rhizosolenia</i> (diatom)	Scattered
Berry Bay	<i>Dinobryon</i> (golden-brown) <i>Coelosphaerium</i> (cyanobacteria) <i>Mallomonas</i> (golden-brown) <i>Chroococcus</i> (cyanobacteria)	Sparse

Phytoplankton populations undergo a natural succession during the growing season (Please refer to the "Biological Monitoring Parameters" section of this report for a more detailed explanation regarding seasonal plankton succession). Diatoms and golden-brown algae are typical in New Hampshire's less productive lakes and ponds.

➤ **Table 2: Cyanobacteria**

A **small amount** of the cyanobacteria *Anabaena* and *Microcystis* were observed in the **OSSIPEE LAKE, LOWER DANFORTH POND, BROAD BAY, LEAVITT BAY, and BERRY BAY** plankton sample this season.

These species, if present in large amounts, can be toxic to livestock, wildlife, pets, and humans. (Please refer to the “Biological Monitoring Parameters” section of this report for a more detailed explanation regarding cyanobacteria).

Cyanobacteria can reach nuisance levels when phosphorus loading from the watershed to surface waters is increased (this is often caused by rain events) and favorable environmental conditions occur (such as a period of sunny, warm weather).

The presence of cyanobacteria serves as a reminder of the lake’s/pond’s delicate balance. Watershed residents should continue to act proactively to reduce nutrient loading to the lake/pond by eliminating fertilizer use on lawns, keeping the lake/pond shoreline natural, re-vegetating cleared areas within the watershed, and properly maintaining septic systems and roads.

In addition, residents should also observe the lake/pond in September and October during the time of fall turnover (lake mixing) to document any algal blooms that may occur. Cyanobacteria have the ability to regulate their depth in the water column by producing or releasing gas from vesicles. However, occasionally lake mixing can affect their buoyancy and cause them to rise to the surface and bloom. Wind and currents tend to “pile” cyanobacteria into scums that accumulate in one section of the lake/pond. If a fall bloom occurs, please collect a sample (any clean jar or bottle will be suitable) and contact the VLAP Coordinator.

➤ **Table 4: pH**

Table 4 (Appendix B) presents the in-lake and tributary current year and historical pH data.

pH is measured on a logarithmic scale of 0 (acidic) to 14 (basic). pH is important to the survival and reproduction of fish and other aquatic life. A pH below 6.0 limits the growth and reproduction of fish. A pH between 6.0 and 7.0 is ideal for fish. The mean pH value for the epilimnion (upper layer) in New Hampshire’s lakes and ponds is **6.6**, which indicates that the surface waters in the state are slightly acidic. For a more detailed explanation regarding pH, please refer to the “Chemical Monitoring Parameters” section of this report.

The pH at the deep spots on the **July** sampling event ranged from **5.90** to **6.84** in the hypolimnion, and from **6.57** to **6.84** in the epilimnion which means that the water is ***slightly acidic***.

It is important to point out that the pH in the hypolimnion (lower layer) was ***lower (more acidic)*** than in the epilimnion (upper layer). This increase in acidity near the lake bottom is likely due the decomposition of organic matter and the release of acidic by-products into the water column.

Due to the presence of granite bedrock in the state and acid deposition (from snowmelt, rainfall, and atmospheric particulates) in New Hampshire, there is not much that can be done to effectively increase lake/pond pH.

➤ **Table 5: Acid Neutralizing Capacity**

Table 5 (Appendix B) presents the current year and historical epilimnetic ANC for each year the lake/pond has been monitored through VLAP.

Buffering capacity (ANC) describes the ability of a solution to resist changes in pH by neutralizing the acidic input. The mean ANC value for New Hampshire's lakes and ponds is **6.6 mg/L**, which indicates that many lakes and ponds in the state are at least "moderately vulnerable" to acidic inputs. For a more detailed explanation, please refer to the "Chemical Monitoring Parameters" section of this report.

The Acid Neutralizing Capacity (ANC) in the epilimnion (the upper layer) of **LAKE OSSIPEE, BROAD BAY, LEAVITT BAY, and BERRY BAY** ranged from **4.3 to 5.1 mg/L**, which is ***less than*** the state mean, and indicates that the surface water in these locations is ***moderately vulnerable*** to acidic inputs.

The ANC in the epilimnion of **LOWER DANFORTH POND** on the **July** sampling event was **8.1 mg/L**, which is ***slightly greater than*** the state mean, and indicates that the surface water in this location is ***moderately vulnerable*** to acidic inputs.

➤ **Table 6: Conductivity**

Table 6 (Appendix B) presents the current and historical conductivity values for tributaries and in-lake data. Conductivity is the numerical expression of the ability of water to carry an electric current (which is determined by the number of negatively charged ions from metals, salts, and minerals in the water column). The mean conductivity value for New Hampshire's lakes and ponds is **59.4 uMhos/cm**. For

a more detailed explanation, please refer to the “Chemical Monitoring Parameters” section of this report.

The epilimnetic conductivity at the deep spots on the **July** sampling event ranged from **41.27 (LEAVITT BAY)** to **56.17 (LOWER DANFORTH POND)**. These values are *slightly less than* the state mean.

While the conductivity levels in the **OSSIPEE SYSTEM** are *less than* the state mean, the epilimnetic conductivity has *gradually increased* at the **BROAD BAY** and **LEAVITT BAY** deep spots since monitoring began in 1990.

Typically, sources of increased conductivity are due to human activity. These activities include septic systems, agricultural runoff, and road runoff (which contains road salt during the spring snow melt). New development in the watershed can alter runoff patterns and expose new soil and bedrock areas, which could contribute to increasing conductivity. In addition, natural sources, such as iron and manganese deposits in bedrock, can influence conductivity.

Please note that tributary sampling was not conducted through VLAP during the 2003 or 2004 season. We recommend that your monitoring group add tributary monitoring to the sampling program since it is important to determine the quality of the water that flows into the lake system.

It is possible that de-icing materials applied to nearby roadways during the winter months may be influencing the conductivity in the lake/pond. In New Hampshire, the most commonly used de-icing material is salt (sodium chloride).

A limited amount of chloride sampling was conducted by the DES Lake Survey Program during the Summer of 2003. Please refer to the discussion of Table 13 for information on the chloride results.

➤ **Table 8: Total Phosphorus**

Table 8 (Appendix B) presents the current year and historical total phosphorus data for in-lake and tributary stations. Phosphorus is the nutrient that limits the algae's ability to grow and reproduce. Please refer to the “Chemical Monitoring Parameters” section of this report for a more detailed explanation.

As discussed previously, tributary sampling was not conducted through VLAP during the Summer of 2003 or 2004. Consequently, we do not have an indication of the phosphorus concentration in the

*tributaries that flow into the **LAKE OSSIPÉE SYSTEM**.*

➤ **Table 9 and Table 10: Dissolved Oxygen and Temperature Data**

Table 9 (Appendix B) shows the dissolved oxygen/temperature profile(s) for the 2004 sampling season. Table 10 (Appendix B) shows the historical and current year dissolved oxygen concentration in the hypolimnion (lower layer). The presence of dissolved oxygen is vital to fish and amphibians in the water column and also to bottom-dwelling organisms. Please refer to the “Chemical Monitoring Parameters” section of this report for a more detailed explanation.

The dissolved oxygen concentration in the bottom meter at the deep spot of **LAKE OSSIPÉE** and **BROAD BAY** was **relatively high (7.1 mg/L and 4.4 mg/L, respectively)** on the **July** sampling event.

The dissolved oxygen concentration in the bottom meter at the deep spot of **LOWER DANFORTH POND, LEAVITT BAY, and BERRY BAY** was **relatively low (2.2 mg/L, 1.6, and 3.2 mg/L, respectively)** on the **July** sampling event. As stratified lakes/ponds age, and as the summer progresses, oxygen typically becomes **depleted** in the hypolimnion by the process of decomposition. Specifically, the loss of oxygen in the hypolimnion results primarily from the process of biological breakdown of organic matter (i.e.; biological organisms use oxygen to break down organic matter), both in the water column and particularly at the bottom of the lake/pond where the water meets the sediment. When oxygen levels are depleted to less than 1 mg/L in the hypolimnion, the phosphorus that is normally bound up in the sediment may be re-released into the water column (a process referred to as **internal phosphorus loading**).

➤ **Table 11: Turbidity**

Table 11 (Appendix B) lists the current year and historical data for in-lake and tributary turbidity. Turbidity in the water is caused by suspended matter, such as clay, silt, and algae. Water clarity is strongly influenced by turbidity. Please refer to the “Other Monitoring Parameters” section of this report for a more detailed explanation.

The turbidity of the hypolimnetic (lower layer) samples collected at the **LAKE OSSIPÉE, BROAD BAY, LEAVITT BAY, and BERRY BAY** deep spot on the **July** sampling event was **slightly elevated (1.63, 1.24, 1.26, and 1.41 NTUs, respectively)**. This suggests that the lake/pond bottom may have been disturbed by the anchor or by the Kemmerer Bottle while sampling or that recent wind and wave action had disturbed the lake bottom. When the lake/pond bottom is disturbed, sediment, which typically contains attached phosphorus, is released into the water column. When collecting the hypolimnion

sample, please check to make sure that there is no sediment in the Kemmerer Bottle before filling the sample bottles.

➤ **Table 12: Bacteria (*E.coli*)**

Table 12 lists only the historical data for bacteria (*E.coli*) testing. (Please note that Table 12 now lists the maximum and minimum results for all past sampling seasons.) *E. coli* is a normal bacterium found in the large intestine of humans and other warm-blooded animals. *E.coli* is used as an indicator organism because it is easily cultured and its presence in the water, in defined amounts, indicates that sewage **MAY** be present. If sewage is present in the water, potentially harmful disease-causing organisms **MAY** also be present.

It should be noted that bacteria sampling was not conducted this year. If residents are concerned about sources of bacteria such as failing septic systems, animal waste, or waterfowl waste, it is best to conduct *E. coli* testing when the water table is high, when beach use is heavy, or immediately after rain events.

➤ **Table 13: Chloride**

The chloride ion (Cl⁻) is found naturally in some surfacewaters and groundwaters and in high concentrations in seawater. Research has shown that **elevated** chloride levels can be toxic to freshwater aquatic life. In order to protect freshwater aquatic life in New Hampshire, the state has adopted **acute and chronic** chloride criteria of **860 and 230 mg/L** respectively. The chloride content in New Hampshire lakes is naturally low, generally less than 2 mg/L in surface waters located in remote areas away from habitation. Higher values are generally associated with salted highways and, to a lesser extent, with septic inputs. Please refer to the “Chemical Monitoring Parameters” section of this report for a more detailed explanation.

The **deep spot** of **LAKE OSSIPPEE, LEAVITT BAY, and BERRY BAY** was sampled for chloride by the **DES Lake Survey Program** in **2003**. The results ranged from **3 to 7 mg/L**, which is ***much less than*** the state acute and chronic chloride criteria. This is good news for the lake. However, we recommend that your monitoring group sample the major inlets to the **LAKE OSSIPPEE SYSTEM** in the spring soon after snow-melt and after rain events during the summer. This will establish a baseline of data which will assist your monitoring group and DES in determining lake quality trends in the future.

In addition, please read this year’s Special Topic Article, “Conductivity is on the rise in New Hampshire’s Lakes and Ponds: What is causing the increase and what can be done?” which is found in Appendix D of

this report. This article may help your association understand what types of activities can lead to elevated conductivity and chloride levels and what residents can do to minimize this type of pollution.

➤ **Table 14: Current Year Biological and Chemical Raw Data**

This table is a new addition to the Annual Report. This table lists the most current sampling season results. Since the maximum, minimum, and annual mean values for each parameter are not shown on this table, this table displays the current year “raw” (meaning unprocessed) data. The results are sorted by station, depth zone (epilimnion, metalimnion, and hypolimnion) and parameter.

➤ **Table 15: Station Table**

This table is a new addition to the Annual Report. As of the Spring of 2004, all historical and current year VLAP data are included in the DES Environmental Monitoring Database (EMD). To facilitate the transfer of VLAP data into the EMD, a new station identification system had to be developed. While volunteer monitoring groups can still use the sampling station names that they have used in the past (and are most familiar with), an EMD station name also exists for each VLAP sampling location. For each station sampled at your lake or pond, Table 15 identifies what EMD station name corresponds to the station names you have used in the past and will continue to use in the future.

DATA QUALITY ASSURANCE AND CONTROL

Annual Assessment Audit:

During the annual visit to your lake/pond, the biologist conducted a “Sampling Procedures Assessment Audit” for your monitoring group. Specifically, the biologist observed the performance of your monitoring group while sampling and filled out an assessment audit sheet to document the ability of the volunteer monitors to follow the proper field sampling procedures (as outlined in the VLAP Monitor’s Field Manual). This assessment is used to identify any aspects of sample collection in which volunteer monitors fail to follow proper procedures, and also provides an opportunity for the biologist to retrain the volunteer monitors as necessary. This will ultimately ensure that the samples that the volunteer monitors collect are truly representative of actual lake and tributary conditions.

Overall, your monitoring group did an **excellent** job collecting samples on the annual biologist visit this season! Specifically, the members of

your monitoring group followed the proper field sampling procedures. Keep up the good work!

USEFUL RESOURCES

Acid Deposition Impacting New Hampshire's Ecosystems, NHDES Fact Sheet ARD-32, (603) 271-2975 or www.des.state.nh.us/factsheets/ard/ard-32.htm.

Best Management Practices to Control Nonpoint Source Pollution: A Guide for Citizens and Town Officials, NHDES Booklet WD-03-42, (603) 271-2975.

Best Management Practices for Well Drilling Operations, NHDES Fact Sheet WD-WSEB-21-4, (603) 271-2975 or www.des.nh.gov/factsheets/ws/ws-21-4.htm.

Canada Geese Facts and Management Options, NHDES Fact Sheet BB-53, (603) 271-2975 or www.des.state.nh.us/factsheets/bb/bb-53.htm.

Cyanobacteria in New Hampshire Waters Potential Dangers of Blue-Green Algae Blooms, NHDES Fact Sheet WMB-10, (603) 271-2975 or www.des.state.nh.us/factsheets/wmb/wmb-10.htm.

Erosion Control for Construction in the Protected Shoreland Buffer Zone, NHDES Fact Sheet WD-SP-1, (603) 271-2975 or www.des.state.nh.us/factsheets/sp/sp-1.htm.

Lake Protection Tips: Some Do's and Don'ts for Maintaining Healthy Lakes, NHDES Fact Sheet WD-BB-9, (603) 271-2975 or www.des.state.nh.us/factsheets/bb/bb-9.htm.

Proper Lawn Care In the Protected Shoreland, The Comprehensive Shoreland Protection Act, NHDES Fact Sheet WD-SP-2, (603) 271-2975 or www.des.state.nh.us/factsheets/sp/sp-2.htm.

Road Salt and Water Quality, NHDES Fact Sheet WD-WMB-4, (603) 271-2975 or www.des.state.nh.us/factsheets/wmb/wmb-4.htm.

Sand Dumping - Beach Construction, NHDES Fact Sheet WD-BB-15, (603) 271-2975 or www.des.state.nh.us/factsheets/bb/bb-15.htm.

Soil Erosion and Sediment Control on Construction Sites, NHDES Fact Sheet WQE-6, (603) 271-2975 or www.des.state.nh.us/factsheets/wqe/wqe-6.htm.